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Montana GIS News

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Natural Resource Information System--Montana State Library Volume II, Number 1, Summer 1990

GIS Interagency Coordination Taking Shape: MOU En Route to Participating Agencies

More than 15 state and federal governmental agencies in Montana have agreed in principle to a Memorandum of Understanding (MOU) that establishes specific objectives for interagency coordination on GIS. At a May 1 meeting in Billings, final changes to the MOU were agreed to by the agencies represented, and the document is now being routed among the agencies for official signatures. The MOU sets up two operating groups.

■ The first group is the **Montana Interagency GIS Management Steering Committee,** which sets policies and is comprised of director-level administrators who control resources and are positioned to influence the kind of actions needed for GIS coordination. For 1990, this group is chaired by Marvin LeNoue, State Director of the U.S. Bureau of Land Management (BLM). The duties of the chair will rotate between state and federal agencies. LeNoue has recommended that the Steering Committee meet once per year in conjunction with an annual data processing coordination meeting that attracts most of the agency directors.

■ The second group is the **Montana Interagency GIS Technical Working Group,** which works on the technical issues regarding coordination, data transfers, standards, etc.. This group is comprised of the leading GIS specialists at each agency, as designated by the Steering Committee. The TWG expects to meet quarterly, and for 1990, is chaired by Don Luse, U.S. Bureau of Indian Affairs (BIA). The TWG has directed that all administrative matters of the Group will be handled by the Natural Resource Information System (NRIS).

At the May 1 meeting, the Steering Committee agreed that the MOU and membership was an open process (i.e., no agency would be excluded). If any agency wishes to be part of this interagency effort, please contact NRIS. ▲

TWG Meets in Bozeman

Fresh from the May 1 meeting, members of the Interagency GIS Technical Working Group resumed their efforts on July 10 at a meeting in Bozeman at the Soil Conservation Service offices. Currently, there are 13 Group members:

· Don Luse, Chair, *US Bureau of Indian Affairs (BIA)*
· Greg Ames, Vice Chair, *Montana Department of Natural Resources and Conservation (DNRC)*
· Allan Cox, Administration, *Montana Natural Resource Information System (NRIS)*
· Lee Shanklin, *US Environmental Protection Agency (EPA)*
· Randy Matchett, *US Fish and Wildlife Service (USFWS)*
· Kristin Gerhart and Bob Lund, *US Soil Conservation Service (SCS)*
· Steve Sherer, *Bonneville Power Administration (BPA)*
· Kathie Jewell, *Bureau of Land Management (BLM)*
· Dick Roullier, *US Forest Service (USFS)*
· Scott Freburg, *Reserved Water Rights Compact Commission (RWRCC)*
· Tony Ledson, *Montana State University (MSU)*
· Dan Olson, *Montana Bureau of Mines and Geology (MBMG)*
· Paul Hyndman, *US Bureau of Mines (USBM)*

Don Luse said one of his priorities for the TWG would be to help agencies with data conversions. For example, Luse recently worked with BLM to transfer data from MOSS to ARC/INFO to DXF. Luse said he would like to see specific data transfer methods compiled in brief "manuals" or at very least, published in this newsletter. Luse asked everyone to document any successful data transfer methods and send them to Allan Cox at NRIS. Steve Sherer, BPA, said that the Northwest Land Information System (LIS) has done several data transfer tests, and would be producing a report soon, which he will make available to the TWG.

In other business, Cox presented the latest version of the *Montana Data Directory*. Cox distributed the three-disk *Directory*, along with a complete User's Manual, to the TWG members, and reported that a data entry program for the *Directory* would be completed August 1. Each member of the TWG was asked to update their records in the *Directory* and return the updated disks to NRIS by October 1. Cox added that NRIS, with cooperation from participating agencies, will maintain the *Directory* and complete an update every year, with the annual GIS conference serving as the target distribution date.

TWG members shared information on current activities. Among the highlights:

USFS: Roullier said the USFS has yet to release the national RFP for GIS acquisition; USFS has a program to scan 24k quads to produce vector or raster output; the USFS is building an ORACLE database and tables of

environmental assessment data collected among the Ranger districts.

BLM: Jewell reported that the BLM has obtained software to covert AMS to ADS; is starting to use AutoCad on transportation plans; has converted wetlands data (7 categories of wetlands) from Ducks Unlimited to MOSS for Blaine, Phillips, and Valley Counties; BLM has asked MSU to digitize seven SCS soils maps as a pilot project; with some funding from the Elk Foundation is working with an interagency task force on an elk management project--digitizing 35 quads near Helena; is getting 100k DLGs for an area east of Billings; and is working on GRASS to MOSS conversions.

BPA: Sherer reported that BPA is building a regional database at 1:250k scale, and will be upgrading to 1:100K resolution; has AMLs to convert DLGs to ARC/INFO; will be creating survey coordinates for all BPA transmission lines; also reported on the Northwest Land Information System (LIS) project, an interagency effort to build a spatial data index for Washington and Oregon.

SCS: Lund and Gerhart reported the SCS is digitizing Lake County for the BIA; has the 24k soils maps for the Flathead reservation as well as other bits and pieces around the state; Fergus, Toole, and Petroleum counties might be done soon; has a pilot project in the Upper Ruby Valley to assess grazing resources. Also reported that the SCS in Fort Worth, Texas is converting TIGER data to a GRASS format.

MSU: Ledson reported that MSU was working on STATSGO with SCS; is digitizing Prairie Dog Towns for the BIA (Fort Belknap); is setting up a GIS teaching lab with 10 ARC/INFO stations; classes to begin in the fall; and has funding to set up GIS research lab.

USFWS: Matchett reported that his GIS project at the wildlife refuge is the only GIS project in Region VI; has bought two TM scenes which are being classified to measure grazing impacts; and is presently looking at a wetlands inventory, cattle movements, Black Footed Ferrets, and Prairie Dogs as part of their GIS project.

EPA: Shanklin reported that EPA has ARC/INFO with Prime computers in each Region and GIS activity is starting to filter down in the regions as part of the Blackfoot River Basin Project; has finished collection of the 100K data; has Landsat TM data for the watershed, and expects to classify 1/3 of the scene; and also stated that the EPA will test the USFS WRENS silvicultural model this summer.

DNRC: Ames said that DNRC has been doing mostly AutoCad for engineering and hydraulic analyses, for example, water quality and water quantity analysis for the Musselshell-- entire basin is on Auto Cad system.

BIA: Luse said the work of a scanning contractor to complete the Fort Peck Soils map (99 quads) is nearing completion; has obtained SPOT scenes for Fort Belknap, Northern Cheyenne, and Crow reservations; just acquired PC-ARC/INFO, GPS, Geolink, and a laptop to do irrigation studies.

RWRCC: Freburg reported that the commission has received data from the BIA for the Northern Cheyenne Reservation and is conducting an irrigation feasibility analysis.

These are just brief notes on agency activities. For more information on the TWG, any of the projects, or if you have any related information, please contact NRIS or the appropriate Group member (refer to your *Montana GIS Users Directory* for addresses and phone numbers). ▲

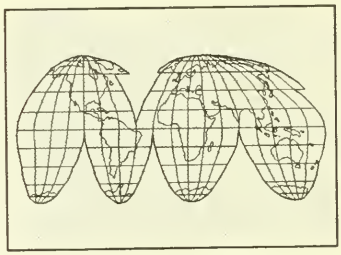
National GIS Compendium in Development

The Council of State Governments, a national group operating out of Lexington, Kentucky, is developing the *State Geographic Information Activities Compendium*. The *Compendium*, produced with the cooperation of each of the fifty states, will focus on aspects of state GIS programs ranging from development and implementation to statewide policy-making and coordination.

The Council has distributed a survey form to each state. In Montana, the NRIS program is serving as the main contact point, using information compiled in the *Montana GIS User Directory* and the *Montana Data Directory* to answer most of the questions. The *Compendium*, which promises to be an extremely useful tool to enhance interstate, regional, and national coordination on GIS, is to be published in late 1990. ▲

NCIC Renamed

The U.S. Geological Survey (USGS) announced that it has changed the name of the National Cartographic Information Center (NCIC) to the Earth Science Information Center (ESIC). ESIC will continue providing users with information concerning maps and remote sensing imagery and offer even more information pertaining to geological and water resources data. ▲



"Montana GIS: Toward a Better Understanding"

The third annual Montana GIS Conference is scheduled for December 5-6, at the Holiday Inn Parkside in Missoula, Montana. More than 300 participants from throughout the Northern Rockies are expected to attend the two-day conference.

The theme for this year's conference is education. Organizers have planned **three concurrent tracks** to match the diverse needs and interests of the expected audience: 1) **Introductory** sessions for novice GIS users; 2) **Technical** sessions for experienced users; and 3) **Management** sessions aimed at administrators and managers. Plenary sessions are also scheduled, focusing on common issues for everyone, such as educational opportunities in GIS, data acquisition, and future trends in the GIS industry.

Several of the major U.S. and Canadian vendors of GIS hardware, software, and services will be on hand to present exhibits and demonstrations. There will also be a poster session where GIS users in Montana will display their projects and answer questions.

The full, pre-registration fee for the conference is $50, which includes all conference materials, two lunches, coffee and beverages at all breaks, two complimentary drink tickets at the Wednesday evening social hour, and tour invitations to GIS facilities in Missoula. To accommodate students and others, there is also a partial, pre-registration fee of $30, which excludes the lunches and the social hour drink tickets.

The conference is sponsored by the ***Montana GIS User Group***, a statewide consortium of Montana governmental agencies and businesses. Serving as host for this year's conference is the University of Montana, School of Forestry. **For more information, contact Ken Wall at (406) 243-2449.**

In conjunction with the conference and in keeping with the theme of education, there will be six workshops on **Tuesday, December 4.** Topics include:

- *Introduction to GIS: Basic Concepts*
- *City/County GIS Applications*
- *GIS Start-up Considerations for Managers*
- *Cartography & GIS*
- *Global Positioning Systems & GIS*
- *Hands-on Applications in GIS*

Fees for the workshops will be set to recover costs (i.e. as low as possible) and are separate from conference registration.

GPS Information Center Ready for Your Call

Planning on using Global Positioning System (GPS) on your next GIS project? Wondering whether the satellites will be available?

Your GPS vendor should provide a long-term schedule of satellite availability. However, a new program called Selective Availability (SA) has been introduced by the U.S. Department of Defense designed to deny full GPS accuracy to potentially hostile users. The good news is that there are ways to avoid the effects of SA, and the U.S. Coast Guard has set up an information service center to help you plan your work.

For daily, updated GPS status information, contact the U.S. Coast Guard GPS Information Center in Alexandria, VA. For human voice communications, call (703) 866-3806; for a recorded message, call (703) 866-3826; for 24-hour computer bulletin board, call (703) 866-3890 (2400 BAUD), or (703) 866-3894 (9600 BAUD). Oh yes, the fax number is (703) 866-3825. ▲

U.S. Bureau of Mines Begins Study

The U.S. Bureau of Mines will begin a study of the Federal mineral estate in western Montana this Fall. The study is part of an ongoing program (Inventory of Land Use Restraints Program - ILURP) by the Bureau to study eleven western states and Alaska. Studies have been completed for Alaska, Arizona, Colorado, Idaho, Nevada, New Mexico, Oregon, and Washington. States currently under study are Utah and Wyoming. The Bureau's Intermountain and Western Field Operations Centers, in Denver, and Spokane, respectively, are conducting the studies.

The objective of the Program is to identify the extent of Federal restraints on mineral entry and development. This is accomplished by (1) identifying the net practical effect of legal and management actions on all parcels of on all parcels of Federal mineral estate, and (2) identifying known mineral deposit areas. These two themes are compared to determine the effect of restraints on areas known to contain mineral deposits.

The Bureau is using ARC/INFO. Any agency having digitized management plans or other information to assist the Bureau, is encouraged to contact: Paul Hyndman, U.S. Bureau of Mines, 360 E. Third Avenue, Spokane, WA 99202 (509) 353-2664. ▲

Data Exchange Alert!

In this issue of the *News*, we are initiating a new column to get the word out on new data and data needs. Who needs what data? Who has something new? The column will be produced to complement NRIS efforts to manage the *Montana Data Directory*.

The first alert concerns a multi-year, interdisciplinary pilot project on elk management coordinated by the Montana Department of Fish, Wildlife, and Parks. The objective is to improve elk habitat on public lands, improve public enjoyment of elk, and help alleviate wildlife depredation on private lands. The project area, entirely within the Helena National Forest, is the Granite Butte Elk Management Unit and encompasses hunting districts 443, 439, and 293. The BLM has agreed to digitize base map and land use data for the 35-quad polygon, with other agencies providing support. The Rocky Mountain Elk Foundation has provided start-up funds for the project.

If you have data for this project, or any other information, now or in the future, please contact NRIS. Also, if you are interested in an automated version of the *Montana Data Directory* (so you can see what data are available to meet your needs), and would like to contribute to the *Directory*, please call NRIS. ▲

Redistricting to Use GIS

Every ten years all congressional districts and most state legislative districts must be redistricted using population data supplied by the U.S. Census Bureau. At a June 8, 1990 meeting, the Montana Districting and Apportionment Commission voted unanimously to conduct Montana's redistricting task with an automated system. The final decision on system acquisition is subject to funding approval by the Montana Legislature.

The Legislative Council staff, in a support role to the Commission, will use the TIGER/Line files and population figures supplied by the Census Bureau to perform the redistricting. Following the apportionment project, a state-wide coverage of the TIGER/Line data will be available to other Montana GIS users. TIGER/Line data provides the geographic link to future demographic products released by the Census Bureau. For more information on the reapportionment project, contact Dave Bohyer, Director, Research Division, Montana Legislative Council, State Capitol, Helena, MT 59620, (406) 444-3064. ▲

Montana GIS: Toward a Better Understanding

Holiday Inn Parkside
Missoula, Montana
December 4-6, 1990

1990 Montana GIS Conference Is Scheduled

Mark your calendars today! **"Montana GIS: Toward a Better Understanding"**, the third annual Montana GIS Conference has been set for December 5-6, at the Holiday Inn Parkside in Missoula, Montana. More than 300 participants from throughout the Northern Rockies are expected to attend.

The theme for this year's conference is education. The planning committee has met several times and are designing an exciting and challenging program. See the enclosed conference announcement. Registration materials will be distributed in the early fall.

Like last year, the conference is sponsored by the Montana GIS User Group, a statewide consortium of Montana governmental agencies and businesses. This year's conference host is the University of Montana, School of Forestry. For more information, contact Ken Wall at (406) 243-2449. ▲

Whither GIS?

by Walter Belokon

In a recent conversation with a professional in another field a few weeks ago, the term GIS was used in a way that really made me wonder what our perceptions are when someone says "GIS." The person who mentioned it was interested in tracing land use changes through time over a specific area. What was said was something to the effect of "I didn't think such things could be done but then somebody told me about GIS."

My first reaction was how can someone think this type of analysis has not been done before, or that it could not be done before GIS became such a "buzz word." Geographers, planners, and foresters, among others have performed these types of analyses for many years. Before automated GIS systems became relatively commonplace, similar activities were carried out through other means, most often through a series of map overlays, which in essence is a GIS. Although the use of a map overlay set lacked much of the glitz and speed of automated systems, these overlays could be used to produce an accurate and reliable product as valid as the output of any computerized GIS.

The key idea is that GIS provides a method of conducting a geographic analysis and that GIS is not on a computer analysis. The focus of the procedure must be on the data and not the brand of software or hardware used to produce it. As common as computers have become in today's world, many people still seem to hold computers and similar "high-tech" instrumentation in awe. This perception then leads to a general attitude that, if it came out of a computerized process, it must be correct and far better than anything produced through manual means.

This is not to discount the benefit that computers provide for geographic analysis, or for any other endeavor of scientific analysis. They save geographers from redrawing maps on a reducer-enlarger to match scales, allow the easy integration of digital satellite imagery into a GIS, and allow large amounts of spatial data to be quickly combined. At the same time, however, automated GIS has opened the process of geographic analysis to many people who may not have been involved or trained in it before. This coupled with proliferation of geographic data, some of dubious quality, being produced and made available to the general public, portends potential problems for the GIS industry.

We in the GIS field must take it upon ourselves to educate those who are obtaining their first systematic initiation to geographic analysis through an automated GIS. Novice users can easily misapply analysis routines or make false assumptions concerning their base data that will lead to the development of faulty and inaccurate geographic models. The use of a computer in analysis does not make it right; it only helps to make model shortcomings apparent. There have been books written on how to manipulate and rearrange one set of statistics to support more than one point of view; we must be careful to restrict the migration of this type of mindset into the GIS field. ▲

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GIS Training in Utah

The Utah Automated Geographic Reference Center (AGRC), an office of Utah State government, is offering a series of GIS classes including: Basic GIS, AML Programming, Map Composition, Using INFO, Data Entry and Editing, Data Conversion, and other topics.

The workshops are being offered in September, 1990, and in January, 1991, at the AGRC facilities in Salt Lake City. The classes vary from one to five days, at $120/day. For information on times, cost, and content, contact Stuart Challender, (801) 538-3164. ▲

Montana GIS News is published by the Natural Resource Information System at the Montana State Library for the Montana Interagency GIS Technical Working Group. Send articles and information for publication to NRIS. To receive the *Montana GIS News*, contact:

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CLASSES AND CONFERENCES

August 12-16, **URISA '90**, Edmonton, Alberta, Canada; Call 202/289-1685.

August 21-24, **NCGA Mapping & GIS Conference '90**, Houston, TX; Call 703/698-9600.

September 3-7, **2nd International Symposium on Precise Positioning with GPS**, Ottawa, Canada; Call 613/995-4009.

September 17-19, **Geographic and Facilities Management: Capture, Conversion, and Sharing;** Madison, WI; Call 608/263-7429.

September 24-26, **Satellite Microwave Remote Sensing and Applications**, George Washington U., Washington, D.C.; Call 800/932-CEEP.

October 22-24, **Applying Infrastructure Management Systems**, Madison, WI; Call 608/263-7429.

November 5-10, **GIS/LIS '90, Annual Conference and Exposition**, Anaheim, California; Call 301/493-0200.

December 4-6, **Montana GIS Conference**, Missoula, MT; Call 406/243-2449 in Missoula, or 444-5354 in Helena.

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